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(71) Applicants (for all designated States except US):
GENSET [FR/FR]; Intellectual Property Department, 24,
rue Royale, F-75008 Paris (FR). COMMISSARIAT A
L'ENERGIE ATOMIQUE [FR/FR]; 31-33, rue de La
Federation, F-75015 Paris (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): FOUILLET, Yves

[FR/FR]; Chemin des Carrieres, Le Chevalon de Voreppe,
F-38340 Voreppe (FR). VAUCHIER, Claude [FR/FR]; 2,
impasse Lartigues, F-38120 Saint-Egreve (FR). CLERC,
Jean-Frederic [FR/FR]; 8, rue du Mont Perthuis, Le
Fontanil-Cornillon, F-38120 Saint-Egreve (FR). PEPO-
NET, Christine [FR/FR]; 5, square des Sarcelles, F-91250
Tigery (FR).

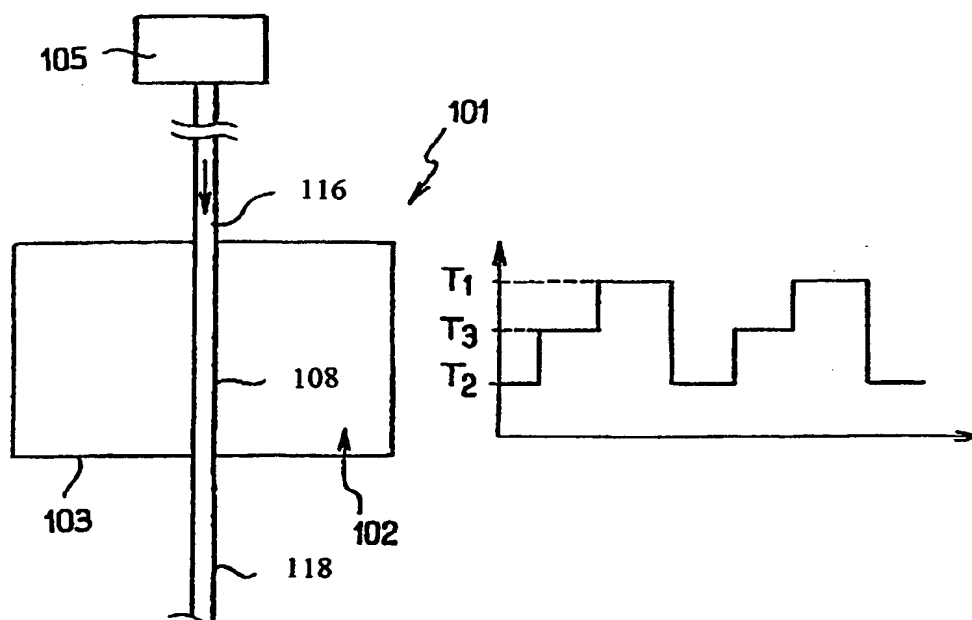
(74) Common Representative: GENSET; Intellectual Prop-
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[Continued on next page]

(54) Title: INTEGRATION OF BIOCHEMICAL PROTOCOLS IN A CONTINUOUS FLOW MICROFLUIDIC DEVICE



(57) Abstract: Provided is a microfluidic device comprising a microfluidic substrate comprising at least one pathway for sample flow; and at least one thermal transfer member which is capable of cycling between at least two temperatures. The thermal transfer member is adapted to heat at least a portion of the sample pathway while a sample is flowing along said at least a portion of said sample pathway. Provided also are methods of carrying out biochemical protocols using such a device.

WO 01/07159 A3



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INTERNATIONAL SEARCH REPORT

International Application No

PC IB 00/01137

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12Q1/68 G01N35/08 B01L7/00 B01L3/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01L G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	GB 2 325 464 A (BRUKER FRANZEN ANALYTIK GMBH) 25 November 1998 (1998-11-25) cited in the application abstract; claims 1-10; figures 1-4 page 7, line 6 - line 30 page 9, line 7 -page 10, line 28 page 11, line 7 - line 28 page 13, line 3 -page 14, line 24 --- -/--	1-40
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

13 November 2000

Date of mailing of the international search report

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

HOCQUET, A

INTERNATIONAL SEARCH REPORT

International Application No

PC IB 00/01137

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KOPP ET AL: "chemical amplification:continuous flow PCR on a chip" SCIENCE,US,AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, vol. 280, no. 280, 15 May 1998 (1998-05-15), pages 1046-1048-1048, XP002107956 ISSN: 0036-8075 page 1046; figure 1B ---	1-40
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 00/01137

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-40

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-40

devices and methods for thermocycling samples flowing continuously along channels

2. Claims: 41-51

process for detecting or identifying in continuous flow nucleotides using microsequencing reagent

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PC IB 00/01137

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International Application No

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